

WHAT IS CLAIMED IS:

1. A method of determining an end of a transmitted frame at a receiver on a frame-based communications network comprising:
  - 5 providing an end of frame format for the transmitted frame having an end of frame plurality of symbols;
  - 10 filtering a received transmitted frame using filter coefficients matched to the end of frame plurality of symbols to provide a correlation sequence low-pass filtered signal;
  - 15 computing a squared magnitude of the correlation sequence; low-pass filtering the squared magnitude of the correlation sequence to provide a low-pass filtered correlation signal; delaying the low-pass filtered correlation signal to provide a delayed low-pass filtered correlation signal;
  - 20 multiplying the delayed low-pass filtered correlation signal by a fixed predetermined threshold to provide a multiplied correlation signal; and comparing the multiplied correlation signal with the low-pass filtered correlation signal to provide a match/no match comparison indicative of the possible end of a transmitted frame.
- 25 2. The method of Claim 1, wherein the filtering is linear matched filtering.
3. The method of Claim 1, wherein the filter coefficients are a time-reversed, complex-conjugated end of frame symbol sequence.
- 30 4. The method of Claim 3, wherein the time-reversed complex-conjugated end of frame symbol sequence is a constant-amplitude zero-autocorrelation sequence.
- 35 5. The method of Claim 3, wherein the time-reversed complex-conjugated end of frame symbol sequence includes complex symbols drawn from a Quadrature Phase Shift Keying or 4-Quadrature

Amplitude Modulation constellation.

5 6. The method of Claim 1, wherein the multiplying includes first computing  $10 \cdot \log_{10}(\cdot)$ , or an approximation of  $10 \cdot \log_{10}(\cdot)$ , of each operand to provide a plurality of log operands and then adding each of the plurality of log operands.

10 7. The method of Claim 1, wherein the comparing includes performing a comparison a predetermined number of times before an end of a transmitted frame is determined.

15 8. A method of determining an end of a transmitted frame at a receiver on a frame-based communications network comprising:

providing an end of frame format for the transmitted frame having an end of frame plurality of symbols;

20 linear matched filtering a received transmitted frame using filter coefficients matched to the end of frame plurality of symbols to provide a correlation sequence, the filter coefficients being a time-reversed complex-conjugated end of frame symbol sequence including complex symbols drawn from a Quadrature Phase Shift Keying or 4-Quadrature Amplitude Modulation constellation;

25 computing a squared magnitude of the correlation sequence;

low-pass filtering the squared magnitude of the correlation sequence to provide a low-pass filtered correlation signal;

delaying the low-pass filtered correlation signal to provide a delayed low-pass filtered correlation signal;

30 multiplying the delayed low-pass filtered correlation signal by a fixed predetermined threshold by first computing  $10 \cdot \log_{10}(\cdot)$ , or an approximation of  $10 \cdot \log_{10}(\cdot)$ , of each low-pass filtered correlation signal operand to provide a plurality of low-pass filtered correlation signal log operands and then adding 35 each of the plurality of low-pass filtered correlation signal log

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5 operands to provide a multiplied correlation signal; and  
comparing the multiplied correlation signal with the low-  
pass filtered correlation signal to provide a match/no match  
comparison indicative of the possible end of a transmitted frame  
and performing a comparison a predetermined number of times  
before an end of a transmitted frame is determined.

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